Stephen Wiggins

List of Publications by Year in descending order

227 papers	11,733 citations	38742 50 h-index	31849 101 g-index
238 all docs	238 docs citations	238 times ranked	4136 citing authors

#	Article	IF	Citations
1	Introduction to Applied Nonlinear Dynamical Systems and Chaos. Texts in Applied Mathematics, 1990, , .	0.4	1,715
2	Global Bifurcations and Chaos. Applied Mathematical Sciences (Switzerland), 1988, , .	0.8	823
3	An analytical study of transport, mixing and chaos in an unsteady vortical flow. Journal of Fluid Mechanics, 1990, 214, 347.	3.4	432
4	Introduction: mixing in microfluidics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2004, 362, 923-935.	3.4	376
5	Chaotic Transport in Dynamical Systems. Interdisciplinary Applied Mathematics, 1992, , .	0.3	326
6	Normally Hyperbolic Invariant Manifolds in Dynamical Systems. Applied Mathematical Sciences (Switzerland), 1994, , .	0.8	298
7	Foundations of chaotic mixing. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2004, 362, 937-970.	3.4	294
8	The geometry of reaction dynamics. Nonlinearity, 2002, 15, 957-992.	1.4	241
9	THE DYNAMICAL SYSTEMS APPROACH TO LAGRANGIAN TRANSPORT IN OCEANIC FLOWS. Annual Review of Fluid Mechanics, 2005, 37, 295-328.	25.0	223
10	Orbits homoclinic to resonances, with an application to chaos in a model of the forced and damped sine-Gordon equation. Physica D: Nonlinear Phenomena, 1992, 57, 185-225.	2.8	199
11	Impenetrable Barriers in Phase-Space. Physical Review Letters, 2001, 86, 5478-5481.	7.8	184
12	Transport in two-dimensional maps. Archive for Rational Mechanics and Analysis, 1990, 109, 239-298.	2.4	183
13	Lagrangian descriptors: A method for revealing phase space structures of general time dependent dynamical systems. Communications in Nonlinear Science and Numerical Simulation, 2013, 18, 3530-3557.	3.3	171
14	Wigner's dynamical transition state theory in phase space: classical and quantum. Nonlinearity, 2008, 21, R1-R118.	1.4	161
15	On the integrability and perturbation of three-dimensional fluid flows with symmetry. Journal of Nonlinear Science, 1994, 4, 157-194.	2.1	129
16	Timeâ€“frequency analysis of chaotic systems. Physica D: Nonlinear Phenomena, 2003, 181, 171-196.	2.8	129
17	A method for visualization of invariant sets of dynamical systems based on the ergodic partition. Chaos, 1999, 9, 213-218.	2.5	116
18	APPLIED PHYSICS: Designing Optimal Micromixers. Science, 2004, 305, 485-486.	12.6	116

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19	TIME-FREQUENCY ANALYSIS OF CLASSICAL TRAJECTORIES OF POLYATOMIC MOLECULES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2001, 11, 1359-1380.	1.7	114
20	A tutorial on dynamical systems concepts applied to Lagrangian transport in oceanic flows defined as finite time data sets: Theoretical and computational issues. Physics Reports, 2006, 437, 55-124.	25.6	111
21	Geometric Structures, Lobe Dynamics, and Lagrangian Transport in Flows with Aperiodic Time-Dependence, with Applications to Rossby Wave Flow. Journal of Nonlinear Science, 1998, 8, 401-456.	2.1	106
22	Phase space conduits for reaction in multidimensional systems: HCN isomerization in three dimensions. Journal of Chemical Physics, 2004, 121, 6207-6225.	3.0	106
23	Distinguished hyperbolic trajectories in time-dependent fluid flows: analytical and computational approach for velocity fields defined as data sets. Nonlinear Processes in Geophysics, 2002, 9, 237-263.	1.3	104
24	Chaotic advection in a Rayleigh-BÃ©nard flow. Physical Review A, 1991, 43, 774-797.	2.5	98
25	Direct construction of a dividing surface of minimal flux for multi-degree-of-freedom systems that cannot be recrossed. Journal of Physics A, 2004, 37, L435-L445.	1.6	97
26	Orbits homoclinic to resonances: The Hamiltonian case. Physica D: Nonlinear Phenomena, 1993, 66, 298-346.	2.8	95
27	On the geometry of transport in phase space I. Transport in k-degree-of-freedom Hamiltonian systems, 2â‰¤k<â^ž. Physica D: Nonlinear Phenomena, 1990, 44, 471-501.	2.8	91
28	N-pulse homoclinic orbits in perturbations of resonant hamiltonian systems. Archive for Rational Mechanics and Analysis, 1995, 130, 25-101.	2.4	91
29	Invariant manifold templates for chaotic advection. Chaos, Solitons and Fractals, 1994, 4, 749-868.	5.1	88
30	Persistent homoclinic orbits for a perturbed nonlinear Schrï¿½dinger equation. Communications on Pure and Applied Mathematics, 1996, 49, 1175-1255.	3.1	88
31	Chaos-assisted capture of irregular moons. Nature, 2003, 423, 264-267.	27.8	88
32	Multi-pulse jumping orbits and homoclinic trees in a modal truncation of the damped-forced nonlinear SchrÃ¶dinger equation. Physica D: Nonlinear Phenomena, 1995, 85, 311-347.	2.8	87
33	Chaos in the quasiperiodically forced duffing oscillator. Physics Letters, Section A: General, Atomic and Solid State Physics, 1987, 124, 138-142.	2.1	86
34	Computation of stable and unstable manifolds of hyperbolic trajectories in two-dimensional, aperiodically time-dependent vector fields. Physica D: Nonlinear Phenomena, 2003, 182, 188-222.	2.8	82
35	Finite-time Lagrangian transport analysis: stable and unstable manifolds of hyperbolic trajectories and finite-time Lyapunov exponents. Nonlinear Processes in Geophysics, 2010, 17, 1-36.	1.3	78
36	A Theoretical Framework for Lagrangian Descriptors. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2017, 27, 1730001.	1.7	69

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37	Homoclinic Orbits in Slowly Varying Oscillators. SIAM Journal on Mathematical Analysis, 1987, 18, 612-629.	1.9	66
38	Chaotic transport in the homoclinic and heteroclinic tangle regions of quasiperiodically forced two-dimensional dynamical systems. Nonlinearity, 1991, 4, 775-819.	1.4	66
39	KAM tori are very sticky: rigorous lower bounds on the time to move away from an invariant Lagrangian torus with linear flow. Physica D: Nonlinear Phenomena, 1994, 71, 102-121.	2.8	64
40	Microcanonical rates, gap times, and phase space dividing surfaces. Journal of Chemical Physics, 2009, 130, 164118.	3.0	62
41	Computation of hyperbolic trajectories and their stable and unstable manifolds for oceanographic flows represented as data sets. Nonlinear Processes in Geophysics, 2004, 11, 17-33.	1.3	61
42	Fluid Exchange across a Meandering Jet Quasiperiodic Variability. Journal of Physical Oceanography, 1996, 26, 1176-1188.	1.7	60
43	Geometry and chaos near resonant equilibria of 3-DOF Hamiltonian systems. Physica D: Nonlinear Phenomena, 1996, 90, 319-365.	2.8	60
44	On the Detection and Dynamical Consequences of Orbits Homoclinic to Hyperbolic Periodic Orbits and Normally Hyperbolic Invariant Tori in a Class of Ordinary Differential Equations. SIAM Journal on Applied Mathematics, 1988, 48, 262-285.	1.8	58
45	Lagrangian Transport through an Ocean Front in the Northwestern Mediterranean Sea. Journal of Physical Oceanography, 2008, 38, 1222-1237.	1.7	56
46	Transport enhancement mechanisms in open cavities. Journal of Fluid Mechanics, 2002, 452, 199-229.	3.4	54
47	A global study of enhanced stretching and diffusion in chaotic tangles. Physics of Fluids A, Fluid Dynamics, 1991, 3, 1039-1050.	1.6	53
48	On the existence of chaos in a class of two-degree-of-freedom, damped, strongly parametrically forced mechanical systems with brokenO(2) symmetry. Zeitschrift Fur Angewandte Mathematik Und Physik, 1993, 44, 201-248.	1.4	52
49	An analytical study of transport in Stokes flows exhibiting large-scale chaos in the eccentric journal bearing. Journal of Fluid Mechanics, 1993, 253, 211.	3.4	50
50	Intergyre transport in a wind-driven, quasigeostrophic double gyre: An application of lobe dynamics. Nonlinear Processes in Geophysics, 2000, 7, 59-85.	1.3	50
51	A computational procedure to detect a new type of high-dimensional chaotic saddle and its application to the 3D Hill's problem. Journal of Physics A, 2004, 37, L257-L265.	1.6	50
52	Identification of low order manifolds: Validating the algorithm of Maas and Pope. Chaos, 1999, 9, 108-123.	2.5	48
53	Nonstatistical dynamics on potentials exhibiting reaction path bifurcations and valley-ridge inflection points. Journal of Chemical Physics, 2013, 139, 154108.	3.0	48
54	Roaming: A Phase Space Perspective. Annual Review of Physical Chemistry, 2017, 68, 499-524.	10.8	48

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55	Lagrangian descriptors for two dimensional, area preserving, autonomous and nonautonomous maps. Communications in Nonlinear Science and Numerical Simulation, 2015, 27, 40-51.	3.3	47
56	Chaos and Three-Dimensional Horseshoes in Slowly Varying Oscillators. Journal of Applied Mechanics, Transactions ASME, 1988, 55, 959-968.	2.2	45
57	Efficient Procedure to Compute the Microcanonical Volume of Initial Conditions that Lead to Escape Trajectories from a Multidimensional Potential Well. Physical Review Letters, 2005, 95, 084301.	7.8	45
58	Patchiness: A New Diagnostic for Lagrangian Trajectory Analysis in Time-Dependent Fluid Flows. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1998, 08, 1053-1093.	1.7	43
59	The role of normally hyperbolic invariant manifolds (NHIMS) in the context of the phase space setting for chemical reaction dynamics. Regular and Chaotic Dynamics, 2016, 21, 621-638.	0.8	43
60	Intergyre transport in a wind-driven, quasigeostrophic double gyre: An application of lobe dynamics. Nonlinear Processes in Geophysics, 2001, 8, 69-94.	1.3	42
61	Multiple transition states and roaming in ionâ€“molecule reactions: A phase space perspective. Chemical Physics Letters, 2014, 592, 282-287.	2.6	42
62	Periodic Orbits in Slowly Varying Oscillators. SIAM Journal on Mathematical Analysis, 1987, 18, 592-611.	1.9	41
63	An adaptive method for computing invariant manifolds in non-autonomous, three-dimensional dynamical systems. Physica D: Nonlinear Phenomena, 2009, 238, 1625-1657.	2.8	39
64	Index k saddles and dividing surfaces in phase space with applications to isomerization dynamics. Journal of Chemical Physics, 2011, 134, 244105.	3.0	38
65	Nonstatistical dynamics on the caldera. Journal of Chemical Physics, 2014, 141, 034111.	3.0	38
66	Chaos in the dynamics generated by sequences of maps, with applications to chaotic advection in flows with aperiodic time dependence. Zeitschrift Fur Angewandte Mathematik Und Physik, 1999, 50, 585.	1.4	37
67	Escape from planetary neighbourhoods. Monthly Notices of the Royal Astronomical Society, 2005, 361, 763-775.	4.4	37
68	Statistical relaxation under nonturbulent chaotic flows: Non-Gaussian high-stretch tails of finite-time Lyapunov exponent distributions. Physical Review Letters, 1993, 70, 275-278.	7.8	36
69	Synoptic Lagrangian maps: Application to surface transport in Monterey Bay. Journal of Marine Research, 2006, 64, 221-247.	0.3	36
70	Linked twist map formalism in two and three dimensions applied to mixing in tumbled granular flows. Journal of Fluid Mechanics, 2008, 602, 129-174.	3.4	36
71	Phase-space geometry and reaction dynamics near index 2 saddles. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 205101.	2.1	36
72	Existence and Computation of Hyperbolic Trajectories of Aperiodically Time Dependent Vector Fields and Their Approximations. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2003, 13, 1449-1457.	1.7	35

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73	Roaming dynamics in ion-molecule reactions: Phase space reaction pathways and geometrical interpretation. Journal of Chemical Physics, 2014, 140, 134112.	3.0	35
74	Lagrangian coherent structure assisted path planning for transoceanic autonomous underwater vehicle missions. Scientific Reports, 2018, 8, 4575.	3.3	35
75	Geometrical models of the phase space structures governing reaction dynamics. Regular and Chaotic Dynamics, 2010, 15, 1-39.	0.8	34
76	The bifurcation to homoclinic tori in the quasiperiodically forced duffing oscillator. Physica D: Nonlinear Phenomena, 1989, 34, 169-182.	2.8	33
77	Chaotic Motions of a Torsional Vibration Absorber. Journal of Applied Mechanics, Transactions ASME, 1988, 55, 952-958.	2.2	32
78	Reaction Path Bifurcation in an Electrocyclic Reaction: Ring-Opening of the Cyclopropyl Radical. Journal of Physical Chemistry A, 2015, 119, 6611-6630.	2.5	32
79	Phase Space Structures Explain Hydrogen Atom Roaming in Formaldehyde Decomposition. Journal of Physical Chemistry Letters, 2015, 6, 4123-4128.	4.6	32
80	Efficient Computation of Transition State Resonances and Reaction Rates from a Quantum Normal Form. Physical Review Letters, 2006, 96, 218302.	7.8	31
81	Lagrangian descriptors and the assessment of the predictive capacity of oceanic data sets. Nonlinear Processes in Geophysics, 2014, 21, 677-689.	1.3	31
82	On Roughness of Exponential Dichotomy. Journal of Mathematical Analysis and Applications, 2001, 262, 39-49.	1.0	30
83	A formula to compute the microcanonical volume of reactive initial conditions in transition state theory. Journal of Physics A, 2005, 38, L759-L768.	1.6	30
84	DNA Microarrays: Design Principles for Maximizing Ergodic, Chaotic Mixing. Small, 2007, 3, 202-218.	10.0	30
85	Mixing by cutting and shuffling. Europhysics Letters, 2010, 91, 20003.	2.0	30
86	A comparison of methods for interpolating chaotic flows from discrete velocity data. Computers and Fluids, 2006, 35, 416-428.	2.5	29
87	A dynamical systems perspective for a real-time response to a marine oil spill. Marine Pollution Bulletin, 2016, 112, 201-210.	5.0	29
88	Lagrangian transport and chaos in the near wake of the flow around an obstacle: a numerical implementation of lobe dynamics. Nonlinear Processes in Geophysics, 1997, 4, 125-136.	1.3	28
89	Lobe area in adiabatic Hamiltonian systems. Physica D: Nonlinear Phenomena, 1991, 51, 205-212.	2.8	27
90	Dynamics associated with a quasiperiodically forced Morse oscillator: Application to molecular dissociation. Physical Review A, 1992, 45, 4803-4827.	2.5	27

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91	Homoclinic orbits and chaos in discretized perturbed NLS systems: Part II. Symbolic dynamics. Journal of Nonlinear Science, 1997, 7, 315-370.	2.1	27
92	Coherent structures and chaotic advection in three dimensions. Journal of Fluid Mechanics, 2010, 654, 1-4.	3.4	27
93	A dynamical systems approach to the surface search for debris associated with the disappearance of flight MH370. Nonlinear Processes in Geophysics, 2015, 22, 701-712.	1.3	26
94	Sampling Phase Space Dividing Surfaces Constructed from Normally Hyperbolic Invariant Manifolds (NHIMs). Journal of Physical Chemistry A, 2018, 122, 8354-8362.	2.5	26
95	Finding NHIM: Identifying high dimensional phase space structures in reaction dynamics using Lagrangian descriptors. Communications in Nonlinear Science and Numerical Simulation, 2019, 79, 104907.	3.3	26
96	Chaotic dynamics of a whirling pendulum. Physica D: Nonlinear Phenomena, 1988, 31, 190-211.	2.8	25
97	Existence of exponentially small separatrix splittings and homoclinic connections between whiskered tori in weakly hyperbolic near-integrable Hamiltonian systems. Physica D: Nonlinear Phenomena, 1998, 114, 3-80.	2.8	25
98	Diffusion of a passive scalar from a no-slip boundary into a two-dimensional chaotic advection field. Journal of Fluid Mechanics, 1998, 372, 119-163.	3.4	25
99	Finding normally hyperbolic invariant manifolds in two and three degrees of freedom with HÃ©non-Heiles-type potential. Physical Review E, 2019, 100, 022204.	2.1	25
100	A Lagrangian description of transport associated with a frontâ€“eddy interaction: Application to data from the North-Western Mediterranean Sea. Physica D: Nonlinear Phenomena, 2011, 240, 282-304.	2.8	24
101	Toward Understanding the Roaming Mechanism in H + MgH â† Mg + HH Reaction. Journal of Physical Chemistry A, 2016, 120, 5145-5154.	2.5	24
102	Detection of Periodic Orbits in Hamiltonian Systems Using Lagrangian Descriptors. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2017, 27, 1750225.	1.7	24
103	Phase Space Structure and Transport in a Caldera Potential Energy Surface. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2018, 28, 1830042.	1.7	24
104	Transport in two-dimensional maps: Concepts, examples, and a comparison of the theory of Rom-Kedar and Wiggins with the Markov model of MacKay, Meiss, Ott, and Percival. Physica D: Nonlinear Phenomena, 1991, 51, 248-266.	2.8	22
105	On the dynamical origin of asymptotic t2 dispersion of a nondiffusive tracer in incompressible laminar flows. Physics of Fluids, 1994, 6, 2227-2229.	4.0	22
106	Maximal Effective Diffusivity for Time-Periodic Incompressible Fluid Flows. SIAM Journal on Applied Mathematics, 1996, 56, 40-56.	1.8	22
107	Phase space barriers and dividing surfaces in the absence of critical points of the potential energy: Application to roaming in ozone. Journal of Chemical Physics, 2016, 144, 054107.	3.0	22
108	Detection of Dynamical Matching in a Caldera Hamiltonian System Using Lagrangian Descriptors. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2020, 30, 2030026.	1.7	22

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109	The dynamical matching mechanism in phase space for caldera-type potential energy surfaces. Chemical Physics Letters, 2020, 743, 137199.	2.6	22
110	Lagrangian Descriptors for Stochastic Differential Equations: A Tool for Revealing the Phase Portrait of Stochastic Dynamical Systems. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2016, 26, 1630036.	1.7	21
111	Eulerian indicators for predicting and optimizing mixing quality. New Journal of Physics, 2009, 11, 075031.	2.9	20
112	Roaming dynamics in ketene isomerization. Theoretical Chemistry Accounts, 2014, 133, 1.	1.4	20
113	Insights into the three-dimensional Lagrangian geometry of the Antarctic polar vortex. Nonlinear Processes in Geophysics, 2017, 24, 379-392.	1.3	20
114	Phase Space Analysis of the Nonexistence of Dynamical Matching in a Stretched Caldera Potential Energy Surface. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2019, 29, 1950057.	1.7	20
115	The tipping times in an Arctic sea ice system under influence of extreme events. Chaos, 2020, 30, 063125.	2.5	20
116	KAM theory near multiplicity one resonant surfaces in perturbations of a-priori stable hamiltonian systems. Journal of Nonlinear Science, 1997, 7, 177-209.	2.1	19
117	Stirred but not mixed. Nature, 1988, 333, 395-396.	27.8	18
118	Isomerization dynamics of a buckled nanobeam. Physical Review E, 2012, 86, 056218.	2.1	18
119	Tilting and Squeezing: Phase Space Geometry of Hamiltonian Saddle-Node Bifurcation and its Influence on Chemical Reaction Dynamics. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2020, 30, 2030008.	1.7	18
120	Residence-time distributions for chaotic flows in pipes. Chaos, 1999, 9, 173-182.	2.5	17
121	Bond breaking in a Morse chain under tension: Fragmentation patterns, higher index saddles, and bond healing. Journal of Chemical Physics, 2013, 138, 134118.	3.0	17
122	BIFURCATIONS OF NORMALLY HYPERBOLIC INVARIANT MANIFOLDS IN ANALYTICALLY TRACTABLE MODELS AND CONSEQUENCES FOR REACTION DYNAMICS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2013, 23, 1330043.	1.7	17
123	Barriers to transport in aperiodically time-dependent two-dimensional velocity fields: Nekhoroshev's theorem and "Nearly Invariant" tori. Nonlinear Processes in Geophysics, 2014, 21, 165-185.	1.3	17
124	The dynamics of elliptically shaped regions of uniform vorticity in time-periodic, linear external velocity fields. Fluid Dynamics Research, 1995, 15, 205-235.	1.3	16
125	Regular and chaotic particle motion near a helical vortex filament. Physica D: Nonlinear Phenomena, 1998, 111, 179-201.	2.8	16
126	Empirical Classification of Trajectory Data: An Opportunity for the Use of Machine Learning in Molecular Dynamics. Journal of Physical Chemistry B, 2018, 122, 3230-3241.	2.6	16

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127	The Application of Lagrangian Descriptors to 3D Vector Fields. Regular and Chaotic Dynamics, 2018, 23, 551-568.	0.8	16
128	The Chaotic Saddle in the Lozi Map, Autonomous and Nonautonomous Versions. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2015, 25, 1550184.	1.7	15
129	Phase space analysis of the dynamics on a potential energy surface with an entrance channel and two potential wells. Physical Review E, 2020, 102, 012215.	2.1	15
130	Exploring isomerization dynamics on a potential energy surface with an index-2 saddle using lagrangian descriptors. Communications in Nonlinear Science and Numerical Simulation, 2020, 89, 105331.	3.3	15
131	Detecting reactive islands in a system-bath model of isomerization. Physical Chemistry Chemical Physics, 2020, 22, 17890-17912.	2.8	15
132	On the dynamics of suspended microstructure in unsteady, spatially inhomogeneous, two-dimensional fluid flows. Journal of Fluid Mechanics Digital Archive, 1991, 228, 207.	0.6	14
133	Adiabatic chaos. Physics Letters, Section A: General, Atomic and Solid State Physics, 1988, 128, 339-342.	2.1	13
134	Lobe dynamics in a kinematic model of a meandering jet. I. Geometry and statistics of transport and lobe dynamics with accelerated convergence. Physica D: Nonlinear Phenomena, 2006, 223, 7-25.	2.8	13
135	Quantum Theory of Reactive Scattering in Phase Space. Advances in Quantum Chemistry, 2010, , 269-332.	0.8	13
136	The Bifurcations of the Critical Points and the Role of Depth in a Symmetric Caldera Potential Energy Surface. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2021, 31, 2130034.	1.7	13
137	Homoclinic Orbits in a Four Dimensional Model of a Perturbed NLS Equation: A Geometric Singular Perturbation Study. Dynamics Reported, 1996, , 190-287.	0.6	13
138	Impenetrable barriers in phase space for deterministic thermostats. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 042001.	2.1	12
139	Detection of Phase Space Structures of the Cat Map with Lagrangian Descriptors. Regular and Chaotic Dynamics, 2018, 23, 751-766.	0.8	12
140	Lagrangian study of the final warming in the southern stratosphere during 2002: Part I. The vortex splitting at upper levels. Climate Dynamics, 2019, 53, 2779-2792.	3.8	12
141	The phase space mechanism for selectivity in a symmetric potential energy surface with a post-transition-state bifurcation. Chemical Physics Letters, 2020, 754, 137610.	2.6	12
142	Fluid mixing and dynamical systems. Nuclear Physics, Section B, Proceedings Supplements, 1987, 2, 179-190.	0.4	11
143	ENSO dynamics in current climate models: an investigation using nonlinear dimensionality reduction. Nonlinear Processes in Geophysics, 2008, 15, 339-363.	1.3	11
144	Chaotic Dynamics in Nonautonomous Maps: Application to the Nonautonomous HÃ©non Map. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2015, 25, 1550172.	1.7	11

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145	The influence of a pitchfork bifurcation of the critical points of a symmetric caldera potential energy surface on dynamical matching. Chemical Physics Letters, 2021, 768, 138397.	2.6	11
146	Title is missing!. Regular and Chaotic Dynamics, 2000, 5, 227.	0.8	11
147	The nature of reactive and non-reactive trajectories for a three dimensional Caldera potential energy surface. Physica D: Nonlinear Phenomena, 2022, 435, 133293.	2.8	11
148	Optimizing mixing in lid-driven flow designs through predictions from Eulerian indicators. Physics of Fluids, 2011, 23, 082005.	4.0	10
149	Eulerian indicators under continuously varying conditions. Physics of Fluids, 2012, 24, .	4.0	10
150	The Generalization of the Periodic Orbit Dividing Surface in Hamiltonian Systems with Three or More Degrees of Freedom â€“ I. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2021, 31, 2130028.	1.7	10
151	Phase space structure and dynamics for the Hamiltonian isokinetic thermostat. Journal of Chemical Physics, 2010, 133, 014105.	3.0	9
152	Persistence of Diophantine flows for quadratic nearly integrable Hamiltonians under slowly decaying aperiodic time dependence. Regular and Chaotic Dynamics, 2014, 19, 586-600.	0.8	9
153	Lagrangian study of the final warming in the southern stratosphere during 2002: Part II. 3D structure. Climate Dynamics, 2019, 53, 1277-1286.	3.8	9
154	Revealing roaming on the double Morse potential energy surface with Lagrangian descriptors. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 235702.	2.1	9
155	The quantum normal form approach to reactive scattering: The cumulative reaction probability for collinear exchange reactions. Journal of Chemical Physics, 2009, 131, 144103.	3.0	8
156	Optimizing mixing in channel flows: kinematic aspects associated with secondary flows in the cross-section. Microfluidics and Nanofluidics, 2011, 10, 249-262.	2.2	8
157	Dynamics on the Double Morse Potential: A Paradigm for Roaming Reactions with no Saddle Points. Regular and Chaotic Dynamics, 2018, 23, 60-79.	0.8	8
158	Visualizing the phase space of the HeI<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.svg"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math> van der Waals complex using Lagrangian descriptors. Communications in Nonlinear Science and Numerical Simulation, 2021, 103, 105993.	3.3	8
159	A simple dynamical system that mimics openâ€flow turbulence. Physics of Fluids A, Fluid Dynamics, 1990, 2, 1983-2001.	1.6	7
160	Transport of a passive tracer in time-dependent Rayleigh-BÃ©nard convection. Physica D: Nonlinear Phenomena, 1991, 51, 472-481.	2.8	7
161	Bernoulli linked-twist maps in the plane. Dynamical Systems, 2010, 25, 483-499.	0.4	7
162	Normal form and Nekhoroshev stability for nearly integrable hamiltonian systems with unconditionally slow aperiodic time dependence. Regular and Chaotic Dynamics, 2014, 19, 363-373.	0.8	7

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163	Lagrangian and Eulerian analysis of transport and mixing in the three dimensional, time dependent Hillâ€™s spherical vortex. Physics of Fluids, 2015, 27, 063603.	4.0	7
164	Phase space structure and escape time dynamics in a Van der Waals model for exothermic reactions. Physical Review E, 2020, 102, 062203.	2.1	7
165	The Dynamics Associated with the Chaotic Tangles of Two Dimensional Quasiperiodic Vector Fields: Theory and Applications. The IMA Volumes in Mathematics and Its Applications, 1992, , 47-138.	0.5	7
166	Structured pathways in the turbulence organizing recent oil spill events in the Eastern Mediterranean. Scientific Reports, 2022, 12, 3662.	3.3	7
167	A Kolmogorov theorem for nearly integrable Poisson systems with asymptotically decaying time-dependent perturbation. Regular and Chaotic Dynamics, 2015, 20, 476-485.	0.8	6
168	Negligibility of small divisor effects in the normal form theory for nearly-integrable Hamiltonians with decaying non-autonomous perturbations. Celestial Mechanics and Dynamical Astronomy, 2016, 125, 247-262.	1.4	6
169	Influence of mass and potential energy surface geometry on roaming in Chesnavichâ€™s CH4+ model. Journal of Chemical Physics, 2018, 149, 094109.	3.0	6
170	The influence of the solventâ€™s mass on the location of the dividing surface for a model Hamiltonian. Chemical Physics Letters: X, 2019, 737, 100030.	2.1	6
171	Lagrangian transport across the upper Arctic waters in the Canada Basin. Quarterly Journal of the Royal Meteorological Society, 2019, 145, 76-91.	2.7	6
172	Roaming at Constant Kinetic Energy: Chesnavichâ€™s Model and the Hamiltonian Isokinetic Thermostat. Regular and Chaotic Dynamics, 2019, 24, 615-627.	0.8	6
173	From PoincarÃ© Maps to Lagrangian Descriptors: The Case of the Valley Ridge Inflection Point Potential. Regular and Chaotic Dynamics, 2021, 26, 147-164.	0.8	6
174	A bridge between invariant dynamical structures and uncertainty quantification. Communications in Nonlinear Science and Numerical Simulation, 2022, 104, 106016.	3.3	6
175	Very High Resolution Tools for the Monitoring and Assessment of Environmental Hazards in Coastal Areas. Frontiers in Marine Science, 2021, 7, .	2.5	6
176	Bifurcation of Dividing Surfaces Constructed from Period-Doubling Bifurcations of Periodic Orbits in a Caldera Potential Energy Surface. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2022, 32, .	1.7	6
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